**AMENDMENTS TO THE CLAIMS**

**This listing of claims will replace all prior versions and listings of claims in the application:**

**LISTING OF CLAIMS:**

**1-6. (cancelled)**

7. (currently amended): A method of producing a glass substrate for a mask blank, comprising:

a plurality of processing steps, including a rough polishing step of a main surface of the glass substrate and a step for eliciting a defect remaining on ~~a~~ the main surface of the glass substrate, and a plurality of post processing steps, including a precision polishing step for providing the main surface with precision polishing, and a cleaning step on said main surface,

wherein ~~a~~ the plurality of post-processing steps ~~is~~ are carried out after the step for eliciting a defect ~~and includes a precision polishing step for providing the main surface with precision polishing~~;

the precision polishing step being carried out so that the main surface has a roughness of 0.2nm or less in terms of the root mean square roughness (RMS) and the cleaning step being carried out after the precision polishing step whereby flatness of the main surface is 1μm or less; and

the step of eliciting the defect comprising the step of:

etching the main surface (1) to remove between 0.01-0.20μm of glass from the main surface and (2) to increase a size of ~~to magnify~~ the defect to the extent that the defect can be detected during a defect inspection step that is carried out after the precision polishing step;

wherein, the etching step being executed on the condition that a polishing-off amount is reduced in the precision polishing step so that a resultant amount of a turned-down edge of the glass substrate falls within a range between -2μm and 0μm after the precision polishing step.

8. (currently amended): The method of producing a glass substrate for a mask blank according to claim 7, wherein the ~~post-processing step includes, in addition to the precision polishing step, a~~ cleaning step for cleaning the main surface after the precision polishing step removes no more than 0.01 μm of glass material.

**9.-11. (canceled)**

12. (currently amended): A method of producing a glass substrate for a mask blank, comprising the steps of:

carrying out a rough polishing step for roughly polishing a main surface of the glass substrate by using abrasive particles having a predetermined average particle size;

carrying out a precision polishing step for polishing the main surface of the glass substrate so that the main surface has a roughness of 0.2nm or less in terms of the root mean square roughness (RMS),

carrying out a cleaning step after the precision polishing step whereby flatness of the main surface is 1μm or less; and

etching, prior to the precision polishing step, the main surface of the glass substrate (1) to remove between 0.01-0.20μm of glass from the main surface and (2) to increase a size of ~~to elicit~~ a crack which extends from the main surface of the glass substrate in the direction of the depth and which might remain on the surface of the glass substrate even after the precision polishing step,

the etching step being executed on the condition that a polishing-off amount is reduced in the precision polishing step so that a resultant amount of a turned-down edge of the glass substrate falls within a range between -2μ m and 0μm after the precision polishing step.

13. (currently amended): The method of producing a glass substrate for a mask blank according to claim 12, ~~further comprising a~~ wherein the cleaning step of cleaning the main surface of the glass substrate after the precision polishing step removes no more than 0.01 μm of glass material.

14. (previously presented): The method of producing a glass substrate for a mask blank according to claim 13, wherein the surface of the glass substrate after the cleaning step has a roughness of 0.2 nm or less in terms of the root mean square roughness (RMS).

15. (original): The method of producing a glass substrate for a mask blank according to claim 13 or 14, wherein the cleaning step uses a solution having an etching function as a cleaning

solution, and the cleaning step is carried out under a condition that causes the glass substrate to be removed by more than 0 μm and below 0.01 μm by etching.

16. (previously presented): The method of producing a glass substrate for a mask blank according to claim 12, wherein the defect inspection step is carried out by a visual inspection.

17. (currently amended): The method of producing a glass substrate for a mask blank according to claim 12, wherein the etching step removes the surface of the glass substrate that is subjected to precision polishing ~~by 0.01 to 0.2 μm~~.

**18. - 19. (canceled).**

20. (previously presented): A method of producing a glass substrate for a mask blank according to claim 7, wherein the precision polishing step is carried out so that the surface of the glass substrate has flatness of 0.2 nm or less in terms of the root mean square roughness (RMS), as required for a selected one of ArF excimer laser, F2 excimer laser, and EUV.

21. (previously presented): A method of producing a glass substrate for a mask blank according to claim 12, wherein the precision polishing step is carried out so that the surface of the glass substrate has flatness of 0.2 nm or less in terms of the root mean square roughness (RMS), as required for a selected one of ArF excimer laser, F2 excimer laser, and EUV.

22. (previously presented): A mask of producing a glass substrate for a mask blank according to claim 12, wherein the abrasive particles used in the rough polishing step are cerium oxide while the abrasive particles used in the precision polishing step are colloidal silica.

23. (previously presented): A mask of producing a glass substrate for a mask blank according to claim 12, wherein the etching step is an isotropical etching step.

24. (previously presented): The method of producing a glass substrate for a mask blank according to claim 7, wherein the etching step is executed at an etching rate between 0.2nm/minute and 2nm/minute.

25. (previously presented): The method of producing a glass substrate for a mask blank according to claim 12, wherein the etching step is executed at an etching rate between 0.2 nm/minute and 2nm/minute.

26. (currently amended): A method of producing a glass substrate for a mask blank, comprising the steps of:

carrying out a rough polishing step for roughly polishing a main surface of the glass substrate;

etching the main surface so as to (1) remove between 0.01-0.20μm of glass from the main surface and (2) increase a size of ~~elicit~~ a defect which remains on the main surface of the glass substrate; ~~and~~

carrying out a precision polishing step on the main surface of the glass; and

carrying out a cleaning step after the precision polishing step whereby flatness of the main surface is 1μm or less;

the etching step being executed on the condition that the defect is magnified to enable detection of the defect during a defect inspection step carried out after the precision polishing step and the main surface of the glass substrate before the precision polishing step becomes equal to or smaller than a predetermined surface roughness in order to reduce a polishing-off amount in the precision polishing step.

27. (previously presented): The method of producing a glass substrate for a mask blank according to claim 26, wherein the etching step is carried out by the use of an alkaline aqueous solution that is weak in an etching ability and that has an etching rate between 0.2 nm/min and 2.0 nm/min.

28. (currently amended): A method of producing a glass substrate for a mask blank, comprising the steps of:

carrying out a rough polishing step for roughly polishing a main surface of the glass substrate;

etching the main surface so as to (1) remove between 0.01-0.20μm of glass from the main surface and (2) increase a size of ~~elicit~~ a defect which remains on the main surface of the glass substrate to a width of 0.2 μm or more;

carrying out a precision polishing step on the main surface of the glass substrate with a predetermined polishing-off amount; and

inspecting a defect on the main surface of the glass substrate after the precision polishing step;

the etching step being for magnifying the defect on the main surface of the glass substrate to the extent that the defect can be detected during the inspecting step;

the inspecting step being carried out by ~~monitoring~~ inspecting the main surface mirror-finished by the precision polishing step and the defect that is located in a position deeper than the predetermined polishing-off amount and that is elicited by the etching step and remains after the precision polishing step.